

# Data Sheet

## FUJITSU Software Infrastructure Manager

Path to achieving software defined infrastructure

### Need to eliminate complexities in a heterogeneous IT environment

The digital universe is growing at a rapid pace, and so the backbone to digitalization - IT infrastructure - needs to be extremely agile and flexible. It has become critical for organizations to make quick decisions and to ensure prompt service delivery to stay competitive in the market. But this is by no means an easy task considering the complexities involved in a multi-vendor, heterogeneous IT environment, where managing pools of resources in computing, storage and networking devices in silos can result in delayed decisions and impact competitiveness.

### Gain agility and simplify IT operations

Enabling customers to drive towards achieving software defined data centers, FUJITSU Software Infrastructure Manager (ISM) provides single, converged management for both the physical and the virtual environment, encompassing of computing, storage and network devices.

ISM saves significant time and OPEX by automating device configurations based on the company's operational policies, further tracking the status of each device and monitoring resource usage patterns. With growing Fujitsu partner eco-system, ISM also helps track and monitor heterogeneous IT environments through integration layers – by providing integration into VMWare® and Microsoft® System center environments.

### Accelerate growth and innovation

ISM helps simplify day-to-day IT operations. Obtain actionable insights and act using programmable APIs:

- Track computing resources and reassign workloads to reduce power
- Increase storage utility based on data usage patterns
- Re-direct network traffic in the event of congestion

Obtain an integrated view and centralized control over a heterogeneous environment with ISM components:

#### DEPLOY

- Mass OS installations
- Automate all device configuration

#### CONTROL

- Node Management
- Health status monitoring
- Capacity management
- Power management

#### DYNAMIZE

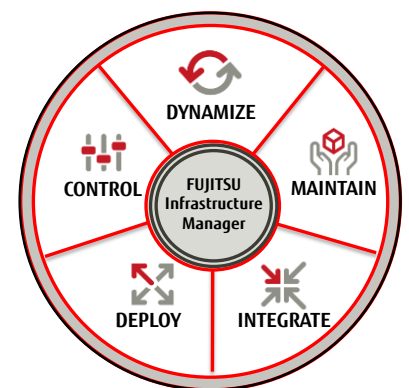
- Converged management
- Virtual-I/O management (VIOM)
- Auto discovery
- Network topology management

#### MAINTAIN

- Update management
- Logging and auditing

#### INTEGRATE

- Integration into heterogeneous IT landscapes



Improve agility and customer response times

90% reduction in firmware update times\*  
50% reduction in power consumption\*

\*based on FUJITSU internal lab testing, in comparison to silo systems

# Features and Benefits

Main features	Benefits
<p><b>DEPLOY</b></p> <ul style="list-style-type: none"> <li>■ Swift and unattended mass OS installation</li> <li>■ Easy, secure and swift deployment</li> <li>■ Create profiles and groups once, and then roll them out to any number of enclosures, servers and storage arrays to ensure compliance and consistency.</li> </ul>	<ul style="list-style-type: none"> <li>■ Significant reduction in OS installation time of up to <b>70%</b></li> <li>■ Reduce administration costs and ensures reliability and availability</li> <li>■ Automate the configuration and installation process of server, storage and network components and increase productivity</li> </ul>
<p><b>CONTROL</b></p> <ul style="list-style-type: none"> <li>■ Comprehensive monitoring and analysis of converged IT infrastructure environment – single or group of nodes connected to the network</li> <li>■ Resource utilization and right allocation through threshold settings and power capping</li> <li>■ Companywide control of assets while maintaining desired level of security</li> </ul>	<ul style="list-style-type: none"> <li>■ Centralized control over infrastructure enabling users to make faster decisions by viewing bottlenecks and system errors.</li> <li>■ Reduces administration costs and increases infrastructure availability.</li> <li>■ Automates routine administration and ensures data security</li> </ul>
<p><b>DYNAMIZE</b></p> <ul style="list-style-type: none"> <li>■ Centralized overview of computing, storage and networking devices highlighting data center status and pin-pointing possible bottlenecks.</li> <li>■ Integrated administration and identification of physical and virtual infrastructure devices connected to the network.</li> <li>■ Auto discovery of nodes when a device is added to the network</li> <li>■ Virtual network performance and bottleneck analysis</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduces customer response time, with less effort and time required to identify the root cause of an issue across the devices registered to ISM</li> <li>■ Optimizes infrastructure life-cycle management operations and provides high-availability.</li> <li>■ Accelerates the node setup process by automatically identifying any new PRIMERGY® or PRIMEQUEST® Server or PSWITCH® addition to the network</li> <li>■ Enables customers to identify network performance bottlenecks, thus proactively helping to ensure business continuity.</li> </ul>
<p><b>MAINTAIN</b></p> <ul style="list-style-type: none"> <li>■ Visibility of computing, storage and network resource utilization, performance of nodes and overall infrastructure</li> <li>■ Define the firmware version to be updated and execute secure firmware update required across devices or components. Execute manually or schedule the update in non-peak hours</li> <li>■ Collect and track event logs for analysis. Obtain user-based event logs and access information for auditing</li> <li>■ Collect hardware status independently from OS condition by communicating with iRMC S5 directly</li> </ul>	<ul style="list-style-type: none"> <li>■ Meet service level agreements by having insight into possible bottlenecks in the infrastructure and taking quick action</li> <li>■ <b>90%</b> reduction in firmware update time and <b>75%</b> reduction in number of steps involved in computing, storage and networking updates, thus further reducing administration costs.</li> <li>■ <b>23 times</b> faster troubleshooting or root cause identification.</li> <li>■ System hardware failure is reported immediately</li> </ul>
<p><b>INTEGRATE</b></p> <ul style="list-style-type: none"> <li>■ Seamless and easy integration into widely used enterprise management systems or vendor-specific server management solutions.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provides a single point of control and administration in heterogeneous environments.</li> </ul>

## DOCUMENTATION

For more information including technical details please refer to data sheets, user manuals and further documents provided on the websites.

# FUJITSU Infrastructure Manager Components Overview



## DEPLOY

All items required for collective deployment of server, storage and network devices and possible automation of the same

### DEPLOY AND AUTOMATE

#### - Profile management

Enables template-based deployment with configuration for hardware components which includes administrator passwords, SNMP, NTP settings, RAID groups, and volumes saved as a profile, copied and applied as a batch to drive automated installation. This helps ensure compliance, consistency and increased productivity. You can also restore existing hardware configurations and create new profiles from existing hardware for simplified transition from existing software to ISM.

#### - Mass OS installation

Easy, swift configuration and unattended installation of operating systems on a scale of devices. Create and execute script which sets several configurations in the final phase of the installation sequence.



## CONTROL

One comprehensive web-based tool consolidates all the management tasks for high levels of availability, flexibility and efficient IT operation.

### MONITORING AND CONTROL

#### - Node management

Discover and register nodes within your network, which consists of all infrastructure devices – servers, storage and network switches. Manage and visualize rack locations on data center floors and node positions within the racks. Node information includes model name, serial number and IP addresses of the node devices

#### - Health status monitoring

Track and monitor the health status of the converged infrastructure, which includes server, storage, network switch and the facility. This can be visualized by the function of the physical configuration such as the rack location on the floor or data center, enabling nodes to be managed intuitively and efficiently. Reduce monitoring costs by consolidating all error reports to one server, sending these to the system log.

#### - Event management

Monitor user operations based on events (SNMP traps) sent from converged IT infrastructure devices registered on ISM. Track parameters such as intake air temperature, CPU utilization and power consumption for each node to ensure it is within defined limits. Set actions such as execution of user scripts or email alerts at user level, based on company policy.

#### - Executing actionable insights

ISM provides flexibility to run external scripts to execute appropriate actions to ensure system availability, reduce network load, etc.

### CAPACITY MANAGEMENT

#### - Threshold manager

Provides accurate warnings about utilization limits of node resources being reached, thus helping to easily identify current performance issues and to ensure constant service delivery.

### POWER MANAGEMENT

#### - Power capping and monitoring functions

Provides power capping function for single devices or groups of devices. By setting the upper limit value of power consumption in a rack and also setting the priority of power capping for each node in the rack, automatic power consumption control can be performed.

### INFRASTRUCTURE MANAGEMENT

#### - Inventory management

Collect information on monitored nodes such as the serial number and firmware version. The solution provides the facility a way to export the gathered information to CSV format.

#### - Multi-tenancy

Assign user access rights to each user or each node based on usage, and associate user groups with node groups. Restrict the infrastructure that can be monitored user-wise based on company policy to ensure security and meet customer SLAs.



## DYNAMIZE

Accelerate, further simplify and dynamize life cycle operations. Become more flexible and make IT operations even more efficient.

### CONVERGED MANAGEMENT

#### - Analytics

Collects and analyzes data to pinpoint the root cause of system outages and performance issues with the converged data center registered to ISM. The dashboard has a customizable design layout, which can be used to highlight priorities to make quick and proactive decisions. Also obtains insight into multiple Infrastructure Management instances in the dashboard.

#### - Auto discovery

Speeds up the node setup process by automatically identifying any new PRIMERGY or PRIMEQUEST server or PSWITCH added to the network.

## VIRTUAL-IO MANAGEMENT

### - Configure virtual MAC and WWN

Virtualize LAN, SAN network, fibre channel and IO parameters. This feature helps eliminate the layer of complexity in current network architectures through virtualization of physical network addresses and clear separation of server management from LAN and SAN management.

### - Resource pooling of MAC and WWN

ISM supports resource pool function of virtual MAC and WWN addresses. User can define address range and assign an ID when a new profile is created. When the profile is deleted, the assigned MAC/WWN is released and can be further re-assigned.

NOTE: the VIOM feature is not supported on BX Servers until April 2018.

## NETWORK TOPOLOGY MANAGEMENT

### - Network map

Obtains a consolidated view of the network topology displaying network connections between multiple nodes of both physical and virtual environments automatically. Tracks possible network congestion and detect network failures in advance.

### - Virtual network analysis

ISM provides virtual network packet analysis providing insights into performance of virtual network ports by port number and VMs. This helps customers identify network performance bottlenecks and proactively helps to ensure business continuity. Network status can be further analyzed by destination, traffic, packet loss and error.



## MAINTAIN

Powerful tools and functions to prevent downtime, recover quickly and save costs.

## UPDATE MANAGEMENT

### - Firmware management

Confirms the firmware versions of each node on the ISM GUI, and executes firmware update to multiple nodes simultaneously. Increases infrastructure availability by ensuring systems run on the latest firmware and avoids omission of update by managing firmware of each node batch wise. Schedule firmware updates in advance to run during non-peak hours and have hassle-free updates without interfering with business operations.

Reduces user operations in preparing firmware data by downloading firmware from global flash.

### - Repository management

Manages repository of update modules that are imported from Update DVD.

## PERFORMANCE MEASUREMENT

### - Performance monitoring

Monitors the utilization of server, storage and network resources; enables long-term monitoring and utilization analysis for specific components; helps to detect resource bottlenecks and to ensures service levels.

## INVESTIGATION

### - Archive management

Device system logs and OS event logs are collected from managed node automatically in scheduled time. Collected logs can be viewed and used for further analysis.

### - Logging and auditing

ISM records user events which includes resources accessed by users, destination, source addresses, time stamp and user login information.



## INTEGRATE

Manage heterogeneous environments with full investment protection.

### - Integration packs

ISM integrates with the following management systems:

- Microsoft SCOM
- Microsoft SCVMM
- VMware vCenter®
- Ansible®
- Openstack®

Note: Openstack integration is limited to monitoring of the openstack environment on ISM.

### - RESTful API

Manage node status and inventory information using REST API. Use programmable APIs or customized scripts to run operations and integrate into the existing management system.

## DOCUMENTATION

For more information including technical details please refer to user manuals, white paper and further documents provided on the websites listed below:

<http://www.fujitsu.com/infrastructuremanagement>

<http://manuals.ts.fujitsu.com/ism>

# Technical Details System Requirements

## ISM V2.3.0

### System requirements for ISM-VA (virtual machines)

Item	Description
Number of CPU cores	2 cores or more
Memory capacity	8 GB or more
Free disk space	35 GB or more
Network	1 Gbps or higher
Hypervisor	Windows Server® 2012 / 2012R2 / 2016 VMware ESXi 5.5 / 6.0 / 6.5/6.7 Red Hat® Enterprise Linux® 6.9 / 7.2 / 7.3/7.4

### System requirements for management terminals

Item	Description
Device	PC, Server, iPad, Android® tablet
Display	PC and server : 1280 x 768 pixels or more Tablet : Display mounted to devices stated above
Network	100 Mbps or more
Web browser	PC and server : Internet Explorer® Microsoft Edge® Mozilla® Firefox® Google® Chrome  iPad : Safari Android tablet : Google Chrome
Related software	Acrobat Reader (for viewing manuals)

### Supported nodes

Product name	
Servers	FUJITSU PRIMERGY RX, CX, BX Servers, FUJITSU PRIMEQUEST Servers
Storage	FUJITSU ETERNUS® DX, AF, NetApp® AFF, NetApp FAS
Network switches	FUJITSU Ethernet ToR Switch (PSWITCH 2048), Brocade®, Cisco®
Facility	PSU, CDU

For more details and specific list of supported devices and functionality, read:

### Product license

Product name	Product form
FUJITSU Software Infrastructure Manager Server Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 1 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 5 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 10 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 20 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 100 Node Adv License V2.x	License key

#### NOTE:

Each server and node license includes a service pack

Server license applies to the managed server which hosts ISM software

Node license is required for each device which needs to be registered and managed by ISM

Support license is required in addition to server and node licenses

# More Information

## Fujitsu optimized services

### Products

[www.fujitsu.com/global/products/](http://www.fujitsu.com/global/products/)  
In addition to the Fujitsu Software Infrastructure Management, Fujitsu offers a full portfolio of other computing products.

### Fujitsu portfolio

Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offerings, ranging from clients to datacenter solutions, and includes the broad stack of Business Solutions, as well as the full stack of cloud offerings. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve the reliability of their IT operations.

### Computing products

[www.fujitsu.com/global/services/computing/](http://www.fujitsu.com/global/services/computing/)

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

To learn more about FUJITSU Software Infrastructure Management please contact your Fujitsu sales representative or Fujitsu business partner, or visit our website.  
[www.fujitsu.com/infrastructuremanagement](http://www.fujitsu.com/infrastructuremanagement)

## Fujitsu green policy innovation

[www.fujitsu.com/global/about/environment/](http://www.fujitsu.com/global/about/environment/)  
Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at:



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